General

Title

Myelodysplastic syndromes (MDS): percentage of MDS patients for whom an established pathologic classification/risk prognostication system was used to help plan therapeutic options.

Source(s)

American Society of Hematology (ASH). Myelodysplastic syndromes (MDS) measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 14 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of myelodysplastic syndromes (MDS) patients greater than 18 years old for whom an established pathologic classification/risk prognostication system (such as the International Prognostic Scoring System [IPSS, IPSS-R], World Health Organization-Based Prognostic Scoring System [WPSS] or Lower-Risk Prognostic Scoring System [LR-PSS, previously MD Anderson]) was used to help plan therapeutic options.

Rationale

Excerpts (verbatim) from guidelines:
The International Prognostic Scoring System (IPSS) for primary myelodysplastic syndromes (MDS) emerged from deliberations of the IMRAW (International MDS Risk Assessment Workshop)… Compared with previous classification systems, the risk-based IPSS has markedly improved prognostic stratification of MDS cases… Both for survival and acute myeloid leukemia (AML) evolution, the IPSS showed statistically

greater prognostic discriminating power than earlier classification methods (National Comprehensive Cancer Network [NCCN], 2016).

Data have indicated a benefit to the addition of other clinical variables to the IPSS to improve the accuracy of prognosis… Following the initial report by Malcovati et al., there have been confirmatory studies demonstrating the usefulness of the WPSS (World Health Organization-Based Prognostic Scoring System). The initial WPSS has been refined to address the notion that the requirement for red blood cell (RBC) transfusion may be somewhat subjective. In the refined WPSS, the measure of the degree of anemia by transfusion dependency is replaced by the presence (or absence) of severe anemia, defined as hemoglobin levels less than 9 g/dL for males and less than 8 g/dL for females. This approach allows for an objective assessment of anemia, while maintaining the prognostic implications of the five risk categories defined in the original WPSS (NCCN, 2016).

The IPSS is an important standard for assessing prognosis of primary untreated adult patients with MDS. To refine the IPSS, MDS patient databases from international institutions were coalesced to assemble a much larger combined database (Revised-IPSS [IPSS-R], n=7012, IPSS, n=816) for analysis… This system comprehensively integrated the numerous known clinical features into a method analyzing MDS patient prognosis more precisely than the initial IPSS. As such, this IPSS-R should prove beneficial for predicting the clinical outcomes of untreated MDS patients and aiding design and analysis of clinical trials in this disease (Greenberg et al., 2012).

Most recently, a revised IPSS (IPSS-R) was developed that also defines five risk groups (Very Low, Low, Intermediate, High, and Very High) versus the four groups in the initial IPSS… The predictive value of the IPSS-R was validated in a number of independent studies based on registry data, including studies that evaluated outcomes for patients treated with hypomethylating agents (NCCN, 2016).

…[O]ther recent studies have confirmed the value of the IPSS-R in treated as well as untreated patients. Since more accurate risk stratification by the IPSS-R compared to the IPSS and WPSS have been demonstrated, the IPSS-R categorization is preferred, although other systems also have good value. It is understood that some ongoing studies are using the IPSS or WPSS. Thus, a transition period is expected before more uniform prognostic risk stratification is accepted by the field (NCCN, 2016).

The LR-PSS, developed by investigators at the MD Anderson Cancer Center, is a prognostic model used in the evaluation of MDS, and was designed to help identify patients with lower-risk disease (IPSS Low or INT-1) who may have poor prognosis… The LR-PSS may be useful in identifying patients with lower-risk disease who have poorer prognosis and require earlier treatment. The prognostic value of the LR-RSS has been validated in several independent studies… (NCCN, 2016).

Although the diagnostic criteria allow for categorization of patients with MDS, the highly variable clinical outcomes within these subgroups indicate a prognostic limitation. The morphologic features contributing to this variability include the wide range of marrow blast percentages for patients with MDS with excess blasts (MDS-EB) (5% to 19%) and cutaneous malignant melanoma (CMML) (1% to 19%); marrow cytogenetics; and the degree and number of morbidity-associated cytopenias. These well-perceive problems for categorizing patients with MDS have led to the development of additional risk-based stratification systems (as described above) (NCCN, 2016).

Evidence for Rationale

American Society of Hematology (ASH). Myelodysplastic syndromes (MDS) measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 14 p.

Greenberg PL, Tuechler H, Schanz J, Sanz G, Garcia-Manero G, SolÃ© F, Bennett JM, Bowen D, Fenaux P, Dreyfus F, Kantarjian H, Kuendgen A, Levis A, Malcovati L, Cazzola M, Cermak J, Fonatsch C, Le Beau MM, Slovak ML, Krieger O, Luebbert M, Maciejewski J, Magalhaes SM, Miyazaki Y, PfeilstÃ¶cker M, Sekeres M, Sperr WR, Stauder R, Tauro S, Valent P, Vallespi T, van de Loosdrecht AA, Germing U, Haase D. Revised international prognostic scoring system for myelodysplastic syndromes. Blood. 2012

Sep 20;120(12):2454-65. PubMed

National Comprehensive Cancer Network (NCCN). NCCN clinical practice guidelines in oncology: myelodysplastic syndromes. V2.2017. Fort Washington (PA): National Comprehensive Cancer Network (NCCN); 2016 Nov 10.

Primary Health Components

Myelodysplastic syndromes (MDS); pathologic classification; risk prognostication system; International Prognostic Scoring System (IPSS, IPSS-R); World Health Organization-Based Prognostic Scoring System (WPSS); Lower-Risk Prognostic Scoring System (LR-PSS); therapeutic options

Denominator Description

The number of myelodysplastic syndromes (MDS) patients in your selection (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

The number of myelodysplastic syndromes (MDS) patients in your selection where you used an established pathologic classification/risk prognostication system to help plan therapeutic options (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Evidence of gap:
The American Society of Hematology (ASH) conducted an analysis of the results of the myelodysplastic syndromes (MDS) chart abstraction done since the tool was released in 2006 (~1400 patients). Performance for this measure was 86.2%. Since 2013, performance for this measure was 72% for 203 patients.

Evidence for Additional Information Supporting Need for the Measure

American Society of Hematology (ASH). Myelodysplastic syndromes (MDS) measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 14 p.

Extent of Measure Testing

The myelodysplastic syndromes (MDS) measure set was developed by the American Society of Hematology (ASH) using a rigorous methodology (adapted from the American Medical Association [AMA]-

convened Physician Consortium for Performance Improvement [PCPI]) and has been field tested. The MDS measure set was accepted by American Board of Internal Medicine (ABIM) for use with practice improvement modules meeting Part 4 of Maintenance of Certification Requirements in 2006.

Evidence for Extent of Measure Testing

Frechette S. (Principal, Northfield Associates, LLC, Warren, VT). Personal communication. 2014 Dec 10. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
The number of myelodysplastic syndromes (MDS) patients in your selection

Patients can be included in the chart abstraction if:

- They have been seen by the practice within the past 18 months
- Management decisions regarding care are made primarily by providers in the practice
- They are greater than 18 years old (or the age at which your institution refers to adult hematologists)

Note: Refer to the original measure documentation for a list of International Classification of Diseases, Tenth Revision (ICD-10) codes used in MDS patient selection.

Exclusions
None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
The number of myelodysplastic syndromes (MDS) patients in your selection where you used an established pathologic classification/risk prognostication system (such as the International Prognostic Scoring System [IPSS, IPSS-R], World Health Organization-Based Prognostic Scoring System [WPSS] or Lower-Risk Prognostic Scoring System [LR-PSS, previously MD Anderson]) to help plan therapeutic options

Exclusions
None

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Measure Specific Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Measure 2: MDS patient where you used an established pathologic classification/risk prognostication system (such as the International Prognostic Scoring System (IPSS, IPSS-R), World Health Organization-Based Prognostic Scoring System (WPSS) or Lower-Risk Prognostic Scoring System (LR-PSS, previously MD Anderson)) to help plan therapeutic options.

Measure Collection Name

Myelodysplastic Syndromes Measure Set

Submitter

American Society of Hematology - Medical Specialty Society

Developer

American Society of Hematology - Medical Specialty Society

Funding Source(s)

The American Society of Hematology

Composition of the Group that Developed the Measure

The American Society of Hematology (ASH) Myelodysplastic Syndromes (MDS) Task Force:

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2017 Feb

Measure Maintenance

American Society of Hematology (ASH) reviews/updates measures annually

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: American Society of Hematology (ASH). Myelodysplastic syndromes (MDS) measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2015 Dec. 16 p.

Measure Availability

Source not available electronically.

For more information, contact the American Society of Hematology (ASH) at 2021 L Street NW, Suite 900, Washington, DC 20036; Phone: 202-776-0544; Fax: 202-776-0545; Web site: www.hematology.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on July 20, 2015. The information was verified by the measure developer on August 27, 2015.

This NQMC summary was updated by ECRI Institute on April 18, 2016. The information was verified by the measure developer on May 24, 2016.

This NQMC summary was updated again by ECRI Institute on March 21, 2017. The information was verified by the measure developer on May 3, 2017.

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Production

Source(s)

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